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Study of public participation in the Shirakami Mountains

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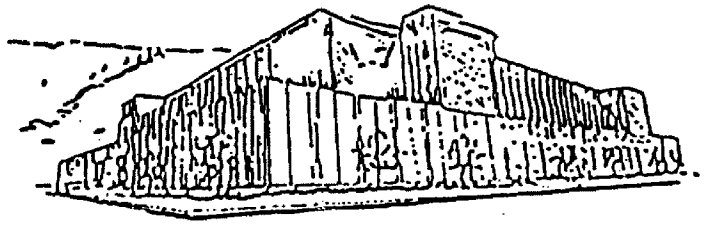

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A STUDY OF PUBLIC PARTICIPATION IN THE SHIRAKAMI MOUNTAINS

by

Yoshitaka Kumagai

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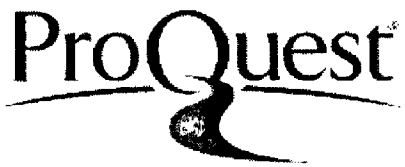

Yoshitaka Kumagai. January 1998 Forestry

Study of public participation in the Shirakami Mountains

Director: Stephen F. McCool

Discussion of public participation has gained attention from various fields in the United States for decades. Issues of public participation in natural resource management are especially the center of topic in recent debate. Researchers from various academic fields have tried to identify reasons and outcomes of such public participation. One might argue that public participation in one paradigm cannot be applicable to others because studying public participation involves multiple perspectives such as political culture, social norms and so on.

Public participation in natural resource management has also gained attention in Japan. However, legislation requiring public participation in natural resource management does not exist in Japan. In addition, social norms and political culture seem to be barrier to public participation there.

Public participation in the Shirakami Mountains, which was designated as the World Heritage Site, has triggered discussion of public participation. Perception of public participation held by both residents in Hachimori Town and officials working for the administrations were surveyed and analyzed. Then, the necessity of and barriers to Japanese public participation are discussed.

Acknowledgments

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Chapter 1

Introduction

In Japan, outdoor recreation has been gaining in popularity for the last decade (Ito 1990; Yamazaki 1991). As this boom grows, the number of reports of resource degradation in protected area has risen (Yamazaki 1991). At the same time, concerns about issues such as user conflict, use limit policies and vandalism have risen along with user criticism of management agencies (Okajima 1990). The circumstances described above have inevitably motivated Japanese to pay more attention to natural resource management (Okajima 1990). Concerns described above seem to derive from several factors such as: (1) lack of a systematic management framework for outdoor recreation management (Ito 1990); (2) budget and human resource constraints (Yamazaki 1991); (3) agencies perceived as non-responsive to user input (Tomanaga 1993); (4) outdoor recreation management not being an established field (Ito 1990); and (5) the rise of environmentalism in Japan (McKean 1983; Okajima 1990).

Although many cultural, geographical and social differences exist between the U.S. and Japan, the issues mentioned above are observed in the U.S. as well. McCool (1996) has mentioned that issues concerning management of outdoor recreation might be universal, "even if institutions for resolving them are different" due to differences in political and social contexts. Hence, management that deals with the issues mentioned above and which were developed in the U.S. are worth considering in reference to other countries with potential adaptation to the local cultural and institutional context (McCool 1996).

This postulate and a desire for how to deal with these problems in Japan serve as inspiration to conduct this study. McCool (1996) has argued that effective outdoor recreation management is composed of two elements: (1) a systematic management framework, and (2) a consensus building or collaborative learning process involving those who are affected by management. This particular study focuses on the latter because the appropriateness and style of public participation in natural resource management is largely influenced by social and cultural influences. The applicability of public participation in different cultural setting remains a problematic element in protected area management.

Statement of problem

As mentioned earlier, effective outdoor recreation management consists of two elements: (1) a systematic management framework, and (2) a consensus. building or collaborative learning process including those persons who are affected by management (Stankey and McCool in press). One might argue what effective natural resource management means. McCool points out that effective management is management that can be implemented (Personal communication 1997). As we have seen in the real world, numerous management strategies and plans are developed, however, relatively few are implemented. One reason for lack of implementation is that protected are planning increasingly occurs in politicized settings, where the political power to implement plans is held by citizen and interest groups (McCool, Personal communication 1997). In such settings, proposed management actions may not be implemented because they adversely impact various interests, regardless of their technical proficiency (McCool, Personal

communication). Hence, the necessity of public participation arises together with a systematic management framework. The issues of public participation have been discussed for decades in the U.S. (Goldenberge and Frideres 1986) and will be described in later section.

Studying public participation in natural resource management in Japan requires different perspectives than in the U.S. The Japanese political and cultural background is different from the American one. As Brown suggests, the necessity of public participation in one society does not necessarily mean it is required for another (Personal communication. 1996). McCool (1996) notes that "the appropriateness of public participation is a culturally determined decision." In other words, the Japanese might not desire public participation because their political and cultural backgrounds may not require or allow public participation for decision making processes in natural resource management. Even if the Japanese desire public participation, the style of the Japanese public participation might be different from the U.S. because the Japanese have different social norms, particularly concerning interpersonal communication. By the same token, their perception of public participation might different from Americans. Moreover, it is important to note that legislation imposing public participation in natural resource management does not exist in Japan (Tomonaga 1993). It is argued that discussion of public participation in the U.S. has been triggered and enhanced by legislation such as the National Environment Policy Act (NEPA), National Forest Management Act (NFMA) and Federal Advisory Committee Act (FACA). That is, the existence of legislation requiring public participation in natural resource management inevitably stimulates attention among the people in the United States (Broberg, Personal communication

1996). Since similar legislation does not exist in Japan, studying public participation in Japan requires different perspectives and considerations than for such study in the U.S.

Study objectives

Public participation in natural resource management has gained attention in Japan (Kakizawa 1991; Tomonaga 1995; Tsuchiya 1995). However, empirical studies that examine public participation processes and perception and/or the appropriate type of public participation for the Japanese have not been observed. For this reason, this study investigates the perceived desirability of public participation in Japan. The study also explores what type of public participation is preferred and suitable for Japanese situations. As mentioned earlier, a type of public participation regarded as appropriate in certain cultural and political contexts does not guarantee its appropriateness for other social and political contexts (Sewell and O'Riordan 1976). By examining Japanese perceptions of public participation, this study might contribute to the management of natural resources in Japan. Therefore, the main problem investigated in this study can be stated as 'How do Japanese perceive the appropriateness of public participation in decision making for protected area management?'

To address this question, the study involves the following objectives:

(1). To examine whether or not Japanese feel that public participation is a necessary process for protected area management.

(2). To investigate what elements are barriers to public participation for the Japanese.

(3). To investigate what type of public participation seems to be favored and suitable for the Japanese.

(4). To investigate differences in perception of public participation held by both public and government officials.

Chapter 2

Literature review

Overview

This literature review consists of eight sections: (1) a brief presentation of background and issues concerning outdoor recreation management in Japan, (2) a discussion of political culture and social norms in Japan, (3) an overview of signs and potentials of public participation in Japan, (4) natural resource management as a wicked problem, (5) the awareness of necessity of public participation in natural resource management in the U.S., (6) issues of public participation, (7) a conceptual framework for investigating public participation in Japan, and (8) arguments about public participation in Japan. Throughout the sections, a discussion for each topic and corresponding hypothesis are presented.

Background and issues of outdoor recreation management in Japan

There are 27 national parks and 55 quasi-national parks in Japan, a country about the size of California (Kanko Hakusho 1994). The national park system came from the U.S. in the 1930's, however, many designated national parks have been used and continue to be used intensively for agriculture, fisheries and forestry. Outdoor recreation has been gaining popularity for the last decade in Japan (Ito 1990; Yamazaki 1991). At the same time, however, this boom has triggered the Japanese people to pay attention to impacts induced by outdoor recreation (Ito 1990). Often, this attention is also put

forward by residents in or near to protected areas (Tomonaga 1993). For instance, conservation groups argue that local access to protected areas also opens them to tourists whose activity causes degradation of naturalness (Honda 1992). Those who live in these parks have also argued that their roads quickly become congested with tourists from other regions on weekends and during national holidays. As community administrators have constructed and expanded methods of access and other facilities to ease the residents' complaints, and to meet tourist's demand, the quality of naturalness has been degraded (Honda 1992). The original dwellers in these natural park communities had welcomed the tourist industry in the early stages, thinking that the industry would bring job opportunities and abundant monetary benefits, but later found out that the benefits were only seasonal (Honda 1992). During the peak season, the community must deal with problems such as garbage, sewage disposal, and water supply. All of this increases cost, and monetary benefits have also disappeared (Honda 1992).

Dwellers within many of these areas have, up until designation of the national park, kept their traditional lifestyles (Reischauer 1977). Their lives have heavily relied on agriculture, forestry, and fisheries. As the tourist industry has grown, their lives have become more dependent on seasonal jobs, as they have left their family businesses behind. Consequently, their cultivated lands and afforested areas lay neglected (Honda 1992).

On the other hand, public administrators and representatives of recreation groups such as hiking and fishing clubs have insisted that taxpayers have the right to visit anywhere they prefer (Tomanaga 1993). Therefore, every natural area should be opened and given easy access. Consequently, national parks and quasi-national parks which have

been developed for "anyone who wants to go there" now confront issues such as user conflict, overcrowding, and disputes regarding use limit policies, making such situations chaotic (Honda 1992). Ironically, the popularity of national and quasi-national parks' has also nowhere to go but down because tourists have begun to realize that they are no longer interested in crowds of people, luxury hotels, vending machines and neon signs which are frequently found throughout national parks and natural settings (Honda 1992).

Several elements seem to affect the issues described above. As explained earlier, lack of a region-wide planning framework and policy are possible factors (Ito 1990). Due to lack of systematic management frameworks, an incremental management style dominates national parks and quasi-national parks throughout Japan (Tomonaga 1993). This circumstance partly derives from the fact that outdoor recreation management as a profession has not been established in Japan (Ito 1990). Overlapping administrative units also can be considered as factors (Asahi Shimbun 1995). For instance, it is common to observe that one park is managed by the Environmental agency while rangers are employed by the Forestry agency, and the land itself is owned by the Forestry agency (Asahi Shimbun 1995). Cooperation between those two agencies may not occur, making management difficult (Asahi Shimbun 1995).

Budget constraints seem to be a major factor for these issues as well. The amount of budget of the Environment Agency is one tenth of that of Environmental Protection Agency (EPA) in the U.S. (Aera Mook 4, 1994). Accumulative debt of the Forestry agency is overwhelming (Asahi Shimbun 1995). Therefore, privatization of national forests is often discussed in the Japanese government (Asahi Shimbun 1995).

All these factors contribute to the issues in natural resource management in Japan.

However, the ways of decision-making process are critical factor as well (Kakizawa 1991). Hence, the necessity of public participation in decision making process for natural resource management captures attention among researchers and managers in Japan (Kakizawa 1991). Detailed discussion for this issue will be presented in the next section.

Political culture and social norms in Japan

The history of democracy in Japan is relatively short (Reischauer 1977). Democracy was not gained through a citizen-based movement, unlike democracies observed in Western countries (Reischauer 1977). It was directed by the General Head Quarters (GHQ) after World War II (Reischauer 1977). Although Japan was transformed from a feudal system to a parliamentary democracy in its political structure about 130 years ago, transformation was not supported by a large number of Japanese people, but rather carried out by a small portion of the Samurai class (Reischauer 1977).

Since the Japanese have a strong sense of belonging to the family, group, and local community, individualism might not have been developed in Japanese society (Matsushita 1975; Reischauer 1977). Democracy, however, depends on individual autonomy, and confronts such Japanese characteristics (Murota 1985). Questions about how the lack of individualism influenced Japanese democracy are beyond the scope of this study. Nevertheless, this Japanese characteristic is worth noting.

Characteristics of the Japanese government also need to be considered for public participation. Although democracy was not gained through a citizen movement, the Japanese people welcomed democracy because it secured freedom of speech, religion, and

assembly (Reischauer 1977). These had been strictly controlled under militarism during the prewar period. However, central figures in the military government remained in the postwar government, and some of them even became Prime Ministers (Reischauer 1977). This fact suggests that the people's awareness of political processes had not changed dramatically even in the postwar period (Murota 1985). For this reason, the Japanese government even today has an authoritarian attitude toward the people (Murota 1985). It has been pointed out that the people did not digest what democracy is because their urgent demands and interests were how to survive starvation and poverty after World War II (Murota 1985). Consequently, top-down decision-making processes, which can be seen as remnants of the feudal system, are still observed in Japanese politics (Richardson 1972).

Based upon the view of Japanese political culture as described above, the following hypothesis is formulated:

Hypothesis 1. The Japanese do not regard public participation as a necessary process in natural resource management.

Evaluation of the public participation environment and natural resource policy

Japan recovered from its defeat in World War II rapidly by intensive economic development (Reischauer 1977). At the same time, this rapid recovery caused serious environmental pollution (Reischauer 1977; Okajima 1990). The fact that energy consumption per acre in Japan during the 1960's was four times as much as that of the U.S. suggests the degree of pollution in Japan during that period (McKean 1981). Eighty percent of the Japanese worried that they would become victims of pollution (McKean 1981).

In the 1960's, several fatal environmental disasters occurred, especially in rural areas (McKean 1981). Central and local governments and enterprises did not respond to the citizens' petitions and requests (McKean 1981). Because of this environmental pollution, voluntary and active political participation by the people began to take place and citizens decided to take action in order to protect their welfare (McKean 1981). It is important to note that public participation in environmental issues in Japan started with the recognition of people as victims of environmental pollution. These victims consisted of a variety of people including ordinary people to professionals (McKean 1981). Since they considered themselves as victims, their movement often could not help but become emotional and radical (McKean 1981). Their antagonistic attitude toward the government and enterprises created the image of the citizen movement as radical (McKean 1981).

Since the 1980's, attention to environmental issues seems to have shifted from environmental pollution to conservation (McKean 1981). Intensive economic growth has been accomplished at the cost of degradation of natural resources (Okajima 1990; Numata

1994). There has been a growing recognition that natural resources are an essential component of the Japanese cultural heritage (Numata 1994).

The conservation movement naturally developed as this recognition among citizens matured. This movement has spread steadily throughout the nation (Okajima1990). At the same time, however, the movement confronts complications about its tactics (Okajima 1990)). Together with conventional tactics of sending advocated candidates to the local assembly, citizens insist that they need access for decision making processes about management of protected areas (McKean 1981).

In 1991, the Forestry Agency decided to allow conservation groups to participate in planning and decision-making processes (Tsuchiya 1994). In considering traditional political culture in Japan, the steps taken by the Forestry Agency are epoch-making. In Mt.Fuji and Izu National Parks, some citizen conservation groups are beginning to get involved in voluntary activities in cooperation with the Environment Agency (Asahi Shimbun 1994). Although these conservation groups still do not have any legal foundation that secures their participation, the Agency admits that citizen support is an indispensable element for these parks due to constraints of budget and human resources (Kanko Hakusho 1994). In Shiretoko National Park, the Environment Agency has begun to ask interested individuals and groups to work voluntarily as park rangers. The Agency holds training sessions for volunteers interested in this task (Asahi Shimbun 1995).

Overall, it is fair to say that every national park and Quasi-national Park requires citizen's support for its management. This cooperative relationship between citizens and the agency may grow continuously because of limited budgets combined with an overwhelming growth of outdoor recreation participation. However, it is argued that

several premises need to be satisfied for implementing public participation.

McKean (1981) suggests that the following three fundamental capacities need to be considered in terms of feasibility for public participation: (1) a population with sufficient education, material comfort, and similar resources to be capable of participating, (2) a political culture in which participation is acceptable behavior; and (3) institutions that guarantee the basic freedoms of speech, press, and assembly essential to effective participation.

First, the educational level in Japan has been regarded as one of the highest among the advanced countries (Reischauer 1977). The fact that illiteracy no longer exists is one of the indicators of this criterion. There is an opportunity for everyone to receive higher education. Material comfort seems to be well satisfied among the majority of the Japanese as Japan's high GNP suggests (Reischauer 1977). Second, the political culture in Japan does not seem to satisfy Mckean's second criterion. As mentioned earlier, several remnants of a feudal system are still observed in the political arena in Japan (Reischauer 1977). For this reason, government officials do not welcome active participation by citizens in the political world. Third, the freedoms of speech, press, and assembly have been guaranteed by the constitution since World War II (Reischauer 1977). Moreover, at present, local government recognizes that unless they offer opportunity for public participation processes such as public hearings, they cannot gain citizen support (McKean 1981).

As described above, two out of three capacities to implement public participation seem to be satisfied. In addition to capacities, a generation change is occurring in the political arena as well as in the public (Reischauer 1977). The prewar generation, still

living under quasi-feudal system, has been replaced by a postwar generation, which was born and raised in a democratic society (McKean 1981). This generation change will influence Japanese political culture.

Natural resource management as a "wicked" (*sensu* Allen and Gould, 1986) problem

Natural resource management involves at least two fundamental processes: (1) descriptive processes that deal with the question of "what is" and (2) prescriptive ones that deal with the question "what should be" (McCool 1996). McCool points out that there should be clear understanding of the difference between these two in natural resource planning. DeSario and Langton (1984) also argue that these differences are critical and need to be understood. They state that technical decisions require the application and extrapolation of science to determine and harness the potential of "what is." Questions of "what should be" involve normative determinations. Scientific information may provide useful guidance when deciding value questions such as the consequences of alternatives, however, it is rarely the sole determinant. Mantell et al. (1986) argues that there are three types of limitations of science's ability to solve problems that exist in natural resource management. These are the following: (1) "compromise imposed by clashes with other values" including issues concerning property rights, politics, and costs, (2) "limitations created by uncertainty," and (3) "protecting the visitor experience." They insist that relying solely on a scientific approach is not sufficient for resolving many issues falling into these three categories.

Godfrey (1982) insists that the "natural scientists cannot... solve the political

problems that may result from the implementation of his or her recommendations... nor can science address aesthetic or emotional conflicts, as opposed to ecological ones." Magill (1991) notes that "resource professionals do not deal well with abstract problems or solutions based on emotional components as a consequence of scientific training which avoids recognizing competing, conflicting, and emotional approaches." McCool (1996) also argues that the ability for solving problems concerning outdoor recreation management based solely upon the scientific approach is limited. He continues that conventional planning and decision making processes, however, have been conducted mainly by the technical elite and administrators whose abilities dealing with dynamic and complex problems tend to be lacking and focus not on what should be, but what is (Personal Communication 1997). This technocratic knowledge can be useful to solve the problem in the "physical or isolated biological system" (Allen and Gould, Jr. 1986). However, many decision-making and planning questions in the real world do not occur in such circumstances (McCool 1996).

DeSario and Langton (1984) point out the peril of solely relying upon technocratic decision making to solve problems concerning social and natural resources management. They state that the reasons for their conclusion as follows: (1) "issues concerning social and political arena are less understood, precise, and measurable than technical concerns," and (2) "expert decision-making bodies must also confront the highly emotional normative considerations that require the effective translation of social values and objectives into public policies."

Furthermore, McCool (1996) points out that technical planning processes are prone to create disagreement because proposed decisions may adversely affect those influenced

and interested. He also argues that the crucial aspect of the reason why many natural resource management plans make both planners and publics frustrated and confused is that many issues of natural resource management concern socio-political questions, whereas they may be stated as bio-technical ones.

The awareness of necessity of public participation in the U.S.

From the beginning of the 1950's, outdoor recreation gained tremendous popularity in the U.S. (Lime and Stankey 1971). Consequently, managers and researchers have identified several important issues such as degradation of natural resources, user conflict and provision of high quality opportunities including those for solitude. To deal with these issues, managers who were trained and educated in forestry applied the carrying capacity paradigm (Stankey and McCool 1984). The fundamental tenet of the paradigm is the identification of a numerical use limit which reflects the capability of an area to support recreation (McCool 1996). During the study and implementation of a carrying capacity paradigm, managers began to realize that there were two elements of recreational carrying capacity that needed to be considered. These were (1) a biophysical aspect and (2) a social aspect (Lime and Stankey 1971). This recognition made managers and researchers reconsider the conventional carrying capacity paradigm because "little was known about visitor experiences and the recreation production process, their interactions with biophysical processes and conditions, and how establishing a carrying capacity would deal with such questions" (McCool 1996).

In addition to this recognition, a number of studies revealed that the relationship

between the amount of use and the degree of impact was not linear. Rather, the degree of impact mainly depends on other factors such as timing and type of use, resource characteristics and so on (Cole 1982; Stankey et al. 1985).

Inherently, carrying capacity foresees limiting the number of users because its intrinsic assumption is that only the number of users causes impact (Stankey and McCool 1984). However, it is argued that establishing a use limit policy suggested by carrying capacity involves numerous considerations and difficulties (McCool 1996). That is, intensive dispute and litigation often results from use limit policies because they inevitably discriminate and eliminate users (McCool 1996). Consequently, managers and researchers eventually recognized two conclusions. These were that: (1) the conventional carrying capacity paradigm did not function as an effective recreational management framework, and (2) this failure forced managers and researchers to think about different dimensions and directions for a carrying capacity model (McCool 1996).

In summary, the conventional approach led to asking the wrong question, "How much is too much?" rather than question such as "How much change is acceptable?" or "What kind of resource and social conditions are desirable?" (Stankey et al. 1985). In addition to issues affecting carrying capacity as a management framework, it is also pointed out that one critical reason why the conventional carrying capacity model failed is that natural resource management concerned socio-political issues, whereas they were usually understood by managers as bio-technical issues (McCool 1996). Hence, the necessity of public values, preferences and opinions began to gain attention among researchers and managers.

One implementation of a public participation strategy was used in the Bob Marshall Wilderness Complex in the 1980's. This case showed that successful implementation of management was composed of two factors, a systematic management framework and effective public participation (Ashor 1985). McCool suggested that the implementation of the Limits of Acceptable Change process in the Bob Marshall Wilderness Complex taught us that (1) consensus among affected groups is necessary because recreation management planning not only involves a bio-technical dimension but also a political one, and (2) while agencies were given planning authority, the public held political authority, namely veto power in controversial situations.

Issues of public participation

Researchers have identified several issues and barriers to public participation. For example, there are some arguments in terms of the type of public participation. Blahna and Yonts-Shepard (1989) point out that complicated and technocratic planning processes were a barrier to implement effective public participation, and agencies like a well planned and formatted process (Twight and Carroll 1983) whereas citizens prefer two-way and informal communication (Sewell and Phillips 1979). Sewell and O'Riordan (1976) propose that procedures for conventional public participation appear to be ineffective and other strategies such as workshops and task forces are capturing attention and expectations. Force and Williams (1989) also observe that publics need two-way communication and sharing in decision-making.

There is also skepticism about the effectiveness and feasibility of public

participation under current public participation procedures. DeSario and Langton (1984) state that although a fair amount of time and money has been invested to hold public hearings and advisory committees, those investments are wasteful. Stankey and Clark (1992) indicate that institutional structure, procedure, and values held by organizations and professionals limit the integration and incorporation of a full range of public values into decision-making. Magill (1991) points out that the agencies accept public input but are suspicious of its validity; this situation leads to an antagonistic public. Gebhardt (1994) points out that administrators fear losing their discretion and control through conducting public participation. There is also a criticism about the attitude of administrators toward the public. Many administrators tend to avoid conflict and disputes (Blahna and Yonts-Shepard 1989), resulting in making the public more antagonistic (Magill 1991). At the same time, citizens are inherently doubtful about making a cooperative partnership with the administrators (Gebhardt 1994).

There are also concerns about evaluation of public participation efforts. Sewell and Phillips (1979) point out that there are no monitoring procedures and/or standards to judge the effectiveness of public participation. They state that agencies tend to consider evaluation as a final process, while Sirmon et al. (1993) points out that evaluation should be taken as a continuous process. Sewell and Phillips (1979) point out that almost every evaluation has been conducted by the agency--a party to the process-- making the focus on the effectiveness of public participation potentially biased. For this reason, Wengert suggest that it is also necessary for citizens to examine public participation efforts (Wengert 1976). Sewell and O'Riordan (1976) insist that public participation is an evolutionary process of social change that aims at political and social egalitarianism.

Lastly, public participation has been criticized because those who participate in public hearings and advisory committees tend to be people of higher socioeconomic status. Consequently, input from minority and non-traditional interests is likely to be limited (Gebhardt 1994), and the distance between those who do participate and those who do not tends to increase (Sewell and O'Riordan 1976).

Although there seems to be an agreement about the necessity of public participation in natural resource management, numerous arguments about its procedures and evaluation processes are observed in the U.S.

Conceptual framework

In the United States, arguments about public participation in natural resources management have occupied the interest of managers, scientists, and public alike for more than two decades (Goldenberge and Frideres 1986). The original conceptual framework for public participation stems primarily from social and political science. Several rationales to support public participation have been identified by researchers.

Some researchers approach public participation from a political context. These arguments are based upon the assumption that public participation should be guaranteed in a democratic society. For instance, Sewell and Coppock (1977) insist that individuals have a right to be informed, consulted, and to express opinions in terms of issues concerning the government. Arnstein (1969) argues that public participation is, "in theory, the cornerstone of democracy - a revealed idea that is vigorously applauded by virtually everyone." She also insists that it is the "means by which they (the public) can

induce significant social reform which makes it possible for them to share in the benefits of the affluent society"(Arnstein 1969). Those who insist on this notion argue that public participation should be regarded as part of a decision making process in a democratic society.

In the U.S., public participation has became a legal requirement for federal natural resources management. For instance, the National Environmental Policy Act (NEPA) and the National Forest Management Act (NFMA) require public participation as part of the planning process. Consequently, it is argued that conventional "management freedom based upon public trust came to an end," and therefore, agencies "must share decision making responsibility with the public"(Sirmon et al. 1993).

Some researchers have discussed the necessity for public participation in the context of current political crises. For instance, Sewell and O'Riordan (1976) point out that serious distrust toward political systems is caused by a lack of communication between the public and administration, resulting in failure of plans and policies. They continue that it was imperative for planners and politicians to recognize the fact that the public did not only want to be heard, but also that their concerns should no longer be ignored. Burton (1978) suggests that "there is a potentially disastrous gap forming between conditions that create public conflict (economic and ecological degradation) and pro-active steps taken by government to deal with them." Sewell and Coppock (1977) argue that effective public participation enhances "public support necessary to develop ideas, promote plans, and successfully implement plans."

Wengert (1976) summarizes five roles of public participation:
(1) participation as policy, (2) participation as strategy, (3) participation as communication,

(4) participation as conflict resolution, and (5) participation as therapy. Concerning the first point, he explains, "Public participation is simply a matter of sound and desirable policy to be implemented in as many ways as possible." This perception is derived from arguments about insufficiency in the democratic system. That is, various opinions of citizens may not be reflected in formalized political decision-making. Second, he explains that participation could be seen as a useful strategy to accomplish desired objectives. It is argued that successful implementation of projects always requires public support (Sewell and O'Riordan 1976). The public will not support the project until they understand it; involvement is a requirement for such understanding (Sewell and O'Riordan 1976). They point out that public participation might serve as a major method for gaining legislative and political support.

As for the third point, public participation can be seen as necessary to reflect citizens' points of view. Wengert (1976) points out that ironically, technicians or bureaucratic specialists tend to make bad decisions when they are made for the public, instead of being made by cooperating with public. Sewell and O'Riordan (1976) argue that input from citizens cannot be ignored regardless of its usefulness and validity. Concerning the fourth point, Sirmon et al. (1993) argue that management agencies cause divisiveness and polarization as they deal with the public because those agencies use authority instead of sharing power. These situations often create serious political distrust (Sewell and O'Riordan 1976). Others also point out that the conflict tends to become serious as agencies try to avoid it (Gebhardt 1995; Blahna and Yonts-Shepard 1989). Wengert (1976) lastly mentions that public participation can function as therapy because to be involved in the decision process provides the cure for "social disease" -- alienation

from society -- that is especially found in the poor.

In the arena of natural resource management, several researchers have discussed the issues of planning processes and public participation. Their arguments mainly derived from confrontation or polarization in the planning process. McCool (1996) states that agencies have authority to make plans, but veto power to implement the plan is held by stakeholders in the political setting. He continues that establishing management goals and objectives lies in the political realm, therefore consensus building with affected citizen is indispensable. McCool and Stankey (1986) point out that "technically appropriate decisions recommended by planning professionals are tempered by social, political, economic, and personal considerations that often dominate the final decision." Cortner and Shannon (1993) argue that the planning process is an inherently political one, and that talking of public participation was talking of mechanisms of politics. They continue, "because of this political nature there will always be unfulfilled expectations, multiple and conflicting goals, institutional constraints, and limits to goal accomplishment."

Arguments for public participation in Japan

It is argued that lack of opportunity for the public to reflect their point of view often makes natural resource management complicated and difficult (Kakizawa 1991). Often times, it is reported that people are not informed of and not involved in the planning and decision-making processes in natural resource management (Tomonaga 1993). Consequently, agencies confront difficulty for implementing projects due to a lack of public support (Tsuchiya 1995). Moreover, Tsuchiya points out that distrust

toward administrators is induced by the lack of public participation, and polarization between the administration and public is amplified. Honda (1992) describes the intense dispute over logging issues at Shiretoko National Park. The Forestry Agency tried to implement its logging activity within the park while local residents and conservation groups opposed it. The Forestry Agency neglected public opinion, and the agency secretly implemented the proposed plan, causing intense criticism and dispute throughout Japan. The proposed plan not only triggered intense dispute but also highlighted decision-making processes that neglect public input and consensus building (Inoue 1996).

Kakizawa (1991) also mentions that public participation and consensus building are necessary processes for national forest management because national forests have multidimensional functions. He argues that there is no single right answer for their management; management requires diversified points of view to set common goals and public support in order to implement proposed actions effectively. However, it is important to understand that whether or not the Japanese people desire public participation in natural resource management is in need of comprehensive research. As Reischauer (1977) points out, the Japanese tend to avoid open confrontation with others. He also describes that the Japanese emphasis on "cooperativeness, reasonableness, and understanding of others are the virtues most admired, not personal drive, forcefulness and individual self-esteem." He continues that the Japanese "skill in cooperation and in avoiding confrontations was virtually necessary, as was also the toning down of individual whims and idiosyncrasies." Although there is growing recognition of the necessity of public participation in natural resource management in Japan, Japanese political culture and a tendency to avoid confrontation described earlier may diminish a will to engage in

public participation. Given these background factors, the following hypothesis is formulated to investigate Japanese perception of public participation:

Hypothesis 2. The Japanese people think that the major barrier to implement public participation exists within the administrative structure and its characteristics.

Japanese communication styles are different from that of the Westerners (Reischauer 1977). The ability to persuade others in formal speech has not been regarded as important and not been developed well until recently (Matsushita 1975). The Japanese tend to prefer indirect expression, such as implications and suggestions, to direct expression (Nakamura 1964; Reischauer 1977). Indirect expression is regarded as a polite and preferable communication method (Nakamura 1964). Reischauer (1977) points out that "Japanese have positive mistrust of verbal skills, thinking that these tend to show superficiality in contrast to inner, less articulate feelings that are communicated by innuendo or by nonverbal skills." For this characteristic, there is not a curriculum equivalent to the public speaking found in schools of Western countries (Matsushita 1975). These characteristics may derived from three primary reasons as follows: (1) the overwhelming number of people in the limited size of the country forces them to express their feelings in an implicit fashion in order to avoid unnecessary conflict (Reischauer 1977), (2) the Japanese are originally agricultural people and tend to settle down permanently in one place. Consequently, they tend to enhance community kinship and unity. Therefore, they use compromise and conciliation in order to maintain their unity, and avoid tension, which might be generated through discussion (Reischauer 1977). (3) To use limited natural resource effectively efficiency is always the most important criterion.

Therefore, family and community kinship and teamwork are critical factors. As a result, dispute and argument that have a potential to cause disunity of the relationship are not welcomed (Nakamura 1964). These characteristics seem to be in striking contrast to the United States where people are composed of diversified races, religions, cultural backgrounds, and social norms. Under such circumstances, contrary to the Japanese society, American people heavily rely on a verbal communication as a dominant tool to express their opinion so that they can deal with diversity and cultural differences (Reischauer 1977). To investigate whether this Japanese indirect communication method prevails during public participation processes, the following hypothesis is postulated:

Hypothesis 3. In public participation, the Japanese prefer indirect communication to a direct one.

As it is often pointed out, seniority prevails in Japanese society (Reischauer 1977). Since Japan is a family oriented society, maintaining a family's reputation and kinship is crucial (Reischauer 1977). The role of the elderly is regarded to be important because, generally speaking, the elderly are regarded as well experienced and mature through longer experiences in life. Therefore, the Japanese think that the elderly will lead a family to the most adequate and appropriate direction without damaging the family's reputation (Reischauer 1977). This system partly stems from the fact that agriculture was the dominant industry for more than a thousand years (Nakamura 1964), and thus there was a lot of stability in residence once a family had settled down. The size of the family used to be large. Moreover, all relatives also tended to settle down in the same area. Under such circumstances, it might be natural for the Japanese to consider carefully what the elderly said in order to maintain family order and discipline (Reischauer 1977).

This seniority system needs to be kept in mind for considering public participation in Japan. Like hypothesis 2, however, the studies of influence of seniority during a dispute about natural resource management have not been conducted. Therefore, the following hypothesis was developed:

Hypothesis 4. The Japanese tend to listen carefully to what the elderly say in decision making processes.

Social hierarchy prevails in every aspect of Japanese society (Reischauer 1977). For instance, whenever the Japanese people introduce each other, they usually mention what organization the person belongs to and what position the person holds in that organization. Once a person's organization and occupation are known, this organizational relationship prevails in the private relationships as well. As Reischauer (1977) points out, "the Japanese consider differing ranks and status natural and inevitable." Thus, the following hypothesis was formulated to examine whether this Japanese tendency is observed in public participation process.

Hypothesis 5. The Japanese tend to emphasize social hierarchy during a public participation process.

Chapter 3

Methods

In this chapter, a brief description of the study area and reasons for selecting this area are presented. Then the sampling method, measurement instrument, and analytical procedures are described.

The Shirakami Mountains study area

The Shirakami Mountain is located in the northern part of the main island of Japan. UNESCO designated the Shirakami Mountains as a World Heritage Site in 1993. The main reason for this designation was the vast primeval beech forests (Inoue1996). Traditional human use in the region has been mainly by residents for activities such as hiking, fishing, processing charcoal, commercial hunting and gathering mushrooms (Asahi Shimbun 1995). The region originally received environmental attention because of a logging road construction project led by the municipal government and Forestry Agency (Inoue 1996). However, nation-wide opposition forced the project to be canceled. Conservation groups and interested citizens together with some officials in the administration then nominated the region as a World Heritage Site in order to preserve the biological values of the Shirakami Mountains. Issues concerning the management of the region, however, have sprouted since the designation (Inoue 1996).

First, UNESCO required a master plan for the region to be submitted. As a result, the Forestry Agency, the Environment Agency, the Agency for Cultural Affairs, and

official government representatives from both Aomori and Akita prefectures formed a Shirakami advisory board to generate the plan. Local residents, conservation groups and other interested citizens insisted that they should be involved in the planning processes in order to reflect their points of view (Hokuu Shinpo 1995). However, the board rejected the request because neither precedent nor legislation exists to provide for such involvement (Hokuu Shinpo 1995). Arguments for public participation in the planning processes, then, became not the only center of attention in the regional level but also captured the attention of people throughout Japan (Inoue 1996).

Second, as described before, the municipal government and the Forestry Agency attempted to construct logging roads in the region before the World Heritage Site nomination. This plan was canceled due to intense opposition. Once this logging road project was canceled, the Forestry Agency designated the region as a 'forest ecosystem protected area,' and suggested prohibition of any human use in the core area of the region in 1990 (Asahi Shimbun 1994). Local residents, representatives of outfitters and recreational organizations were upset by an unexpected policy limiting recreation use suggested by the Forestry Agency (Asahi Shimbun 1994). They insisted that they have the right to use resources in the region (Asahi Shimbun 1994). In addition, they argued that main purposes of World Heritage Site designation was not only to preserve the region but also provide adequate recreation and study opportunity for people. Therefore, they insisted that prohibition of human use contradicts the objective of the World Heritage Site.

Third, officials in the local municipal government expected that designation of the World Heritage Site would revitalize the local economy. Towns and villages surrounding

the region traditionally relied on primary industries, especially forestry and fisheries (Inoue 1996). However, those industries have declined dramatically due to the drastic change in the economic structure of Japan (Inoue 1996). Therefore, officials promote tourism as an expected and profitable industry that would revitalize the local economy (Asahi Simbun 1987). Numerous projects concerning tourism were planned by various agencies. However, their plans conflicted with the use limit policy suggested by the Forestry agency.

The Shirakami advisory board developed a master plan and submitted it to UNESCO (*Shirakami Sanchi Sekai Isan Chiiki Keikaku* 1995). The plan indicated that public input would be considered regarding the use limit policy in the core area. To do so, agencies set forth a round-table that consisted of representatives of interested citizens. Twenty-four and seventeen committee members were selected from Aomori and Akita prefectures respectively. The Shirakami advisory board stated that they would make a final decision regarding the use limit policy in the core area. However, representative of the Shirakami advisory board suggested that the board would consider inputs and suggestions about the use limit policy submitted by the round-table (*Shirakami Sanchi Sekai Isan Chiiki Keikaku* 1995).

Research method

In this study, mail survey and telephone interviews were used to investigate the need for and perception of public participation in Japan for the case study area. Hachimori town, which is one of the base towns of the Shirakami Mountains, has an estimated population of 5,000 people (Inoue 1996). The main industries of the town are forestry, agriculture, and fisheries (Inoue 1996). A sample of residents was chosen to receive the mail survey. Respondents from the public were chosen by a random sampling method from the telephone directory of the town. Ninety nine randomly chosen respondents received a six-page questionnaire consisting of twenty-three questions. The questionnaire is shown in Appendix

Telephone interviews were conducted with six officials who worked with members of the round-table. Interviews explored perceptions held by officials. The questionnaire for the official interview consists of seven questions (Appendix). The series of questions was designed to investigate an official's point of view regarding public participation in the Shirakami Mountains. The results of both the public mail survey and interviews of officials were analyzed.

Chapter 4

Results

Overview

The mail survey was conducted in February 1997. Ninety-nine respondents were randomly selected from the telephone directory. From the ninety-nine respondents, thirty-eight responded, resulting in response rate of 38%. The relatively low response rate stemmed from the difficulty of conducting the survey remotely from the U.S. and budget constraints.

Table 1. Respondents Age class

Age class	Frequency	Percent (%)
21-30	0	0
31-40	3	7.9
41-50	10	26.3
51-60	8	21.1
61-70	8	21.1
70-	9	23.7
Total	38	100

The highest number of responses comes from the age group (41-50), followed by (over 70), (51-60), (61-70) and (31-40). There are potentially three explanations for this. First, adults were more likely to be sampled, because the sample was taken from telephone books listing heads of household, usually the oldest male. Second, people over 40 might have been more interested than younger people in the potential of the tourism industry to revitalize the local economy. Therefore, they might have been more interested in the issues of management of the Shirakami Mountains. Third, the region relies heavily on primary industry such as fisheries and forestry and job opportunities in these

industries are limited because Japanese industries have become more oriented toward service and high technology (Inoue 1996). Consequently, the younger generation tends to leave for urban areas to seek job opportunities after they graduate from high school, resulting in relatively few younger respondents in this mail survey.

As Table 2 shows, the most frequently reported educational background of respondents of this survey is the group Junior High school, followed by Secondary High School, Four-Year College, Elementary School, and Technical School. This seems to reflect the socio-demographic characteristics of the region. At present, more than 98% of Japanese complete secondary high school education, and an average 40% complete college. The educational level of the sample is low compared to nationwide patterns. Several reasons for these educational characteristics might exist.

First, many people over 60 were individuals in the military during World War II, resulting in missed educational opportunities. Second, the average educational level before the 1950's was dramatically low compared with current educational trends. Third, in traditional Japanese society, the male is expected to succeed his father in the family occupation (Reischauer 1997). Because agriculture is the dominant occupation in this region, higher education was not regarded as essential.

Table 2. Educational background of the respondents

Education	Frequency	Percent(%)
Elementary School	6	15.8
Junior High School	12	31.6
Secondary High School	9	23.7
Two-year College	4	10.6
four-year College	7	18.4
Total	38	100

Results for Hypotheses 1

Hypothesis. 1 Japanese people do not feel that public involvement is a necessary process in natural resource management

Respondents were asked to indicate their feeling about agreement or disagreement with each of seven questions. Results are shown in Table 3. Officials were also asked five questions regarding this hypothesis. The results are shown in Table 4. In the mail survey, the percentage in each category agreeing or disagreeing with the statement is shown.

Respondents were first asked about their evaluation of how well the agencies were doing in management of the Shirakami Mountains. Among the respondents, 16% felt that agencies were doing well regarding the management of the Shirakami Mountains whereas 57% hold some degree of negative impression about it. Twenty-seven percent of the respondent was not sure. Thus, the majority of the respondents did not feel that agencies were doing good job of managing of the Shirakami Mountains.

The next question reveals the respondent's perception of the need to be informed about the management of the Shirakami Mountains. The results show that all respondents expect that they should be at least informed regarding management of the Shirakami Mountains.

The third question investigated the respondent's perception of the necessity of involving the public in the management of the Shirakami Mountains. More than 94% of the respondents felt that they needed to be involved in management of the Shirakami Mountains.

The fourth question investigated the respondent's perception of the possibility for cooperative relationships between the public and the agencies about the management of the Shirakami Mountains. Approximately 70% of the respondents felt that the agencies and the public could work together, whereas 13% of the respondents thought this was not possible.

The fifth question inquired about how respondents perceived the value of their opinions and other inputs to the management of the Shirakami Mountains. Roughly 70% of the respondents felt that their inputs could contribute to management, whereas about 20% felt that their opinion would not.

The sixth question inquired about whether or not respondents felt that they should simply follow the agency's decision. Among the respondents, 65% felt that they should not simply follow the agencies' decision while 13.5% felt that they should.

The seventh question investigated how seriously the respondents expect their opinions to be considered by the agencies. Eighty- six percent of the respondents felt that their inputs should be carefully considered whereas 2.6% of the respondents did not.

As described above, the respondents to the survey do feel that public participation is important for the management of Shirakami Mountains. These responses suggest rejection of Hypothesis 1 since they do support public participation.

Table 3. Summary table of the results for the hypothesis 1 in the mail survey

	Strongly Disagree	Disagree	Somewhat Disagree	I am not sure	Somewhat Agree	Agree	Strongly Agree
	-3	-2	-1	0	1	2	3
1. I think that the agencies are doing well in the management of the Shirakami Mountains.	13.5%	21.6%	21.6%	27.0%	10.8%	0%	5.4%
2. The public should be at least informed about the management of the Shirakami Mountain	0%	0%	0%	2.8%	8.3%	27.8%	61.1%
3. I think that the agencies need to involve the public for the management of the Shirakami Mountains	0%	0%	0%	5.3%	18.4%	26.3%	50.0%
4. I feel that the agencies can work together with the public about the management of the Shirakami Mountains	0%	2.6%	10.5%	18.4%	10.5%	36.8%	21.1%
5. I feel that my opinion can contribute to the management of the Shirakami Mountains	7.9%	5.3%	5.3%	13.2%	28.9%	21.1%	18.4%
6. I feel that the residents should follow the government's decision because they have an authority to do it.	23.7%	21.1%	21.1%	21.1%	2.6%	5.3%	5.3%
7. Opinions and inputs from residents should be carefully considered.	0%	0%	2.6%	10.5%	21.1%	23.7%	42.1%

Results of the official interview

In the first question, each official was asked if he felt that public participation (the round-table in this study) in natural resource management was a necessary process. All six respondents answered that it was necessary. However, two of them emphasized that the Shirakami Mountains were a special case. Those two stated that it was a necessary process because the master plan stated that public participation was necessary. They added that this process was necessary in this occasion because the public requested public involvement for the decision making processes regarding the use limit policy. If they had

rejected the request, it might induce serious distrust and criticisms toward the agencies, resulting in a chaotic situation.

Among the four other officials who regarded public participation as a necessary process, one stated that it was beneficial. Another mentioned that it would a become more important process regarding management of national forests in the future. The other two officials remarked that public participation was a very necessary process. They suggested that having public participation enhanced relationships between public and officials.

The second question inquired about whether or not the officials felt that public participation could help to gain public support and understanding about the use limit policy. Among the six, four of them replied that it could help gain public support and understanding. One of them stated that the process enhanced relationship between the officials and the public. One official mentioned that both the officials and the public realized that they share a common goal for the management of the Shirakami Mountains, resulting in enhancing mutual trust. One suggested that the process could operate effectively only when representatives of the public were familiar with this type of opportunity. Two officials mentioned that they wanted to avoid concluding the process was effective. However, they also implied that they expected the process to be successfully being carried out.

The third question examined whether or not the officials felt a public participation process could contribute to implementing a use limit policy in the core zone. Among the six, all of them remarked that the process could contribute to making a use limit policy. One pointed out that the number of criticisms from the public dramatically decreased

since the round table began. Two of them stated that the process was helpful because a use limit policy might reflect the public's point of view. One stated that the process not only provided opportunities to reflect the public's point of view but also enhanced mutual understanding. One mentioned that the process could be helpful in this case. However, the official stated that he was skeptical regarding the effectiveness of a process like this in other circumstances.

The fourth question asked if the officials felt that public participation might make the situation more chaotic. Among the six, no one held this opinion. All of them said that they had not experienced controversial conditions and that were confident that this process would be successful in this case.

The fifth question investigated whether or not the officials felt that they could learn from the public throughout the process. Among the six officials, one stated that he could learn from the public to a certain extent. Two of them pointed out that they did not learn anything particular from the public but they did realize both officials and the public share the same goal regarding the management of the Shirakami Mountains. One remarked that he knew what the public intended to mention regarding a use limit policy before the process began. Two of them mentioned that officials seemed to have more knowledge in terms of issues regarding the use limit policy than did the public.

The sixth question inquired about how the officials perceived a public participation process. Four of six stated that such a process could be regarded as a method to gain public support for a use limit policy. One of them mentioned that the process was an opportunity to inform and educate the public about a use limit policy and about the complexity of the decision making process in natural resource management.

One official remarked that this type of process could not but become more prevalent for management of national forests in the future. He pointed out that agencies could no longer ignore criticism and inputs from the public. He did not, however, articulate that the agencies should hold a process like this.

The perceptions of public participation manifested by officials were somewhat different from those of the residents. Although almost all officials admitted several advantages of public participation, two officials suggest that this case was special. They pointed out that public participation was conducted because the master plan required it for shaping a use limit policy in the core zone. They addressed the background for the agencies to hold the public participation in this case. Local residents, interested citizens and several conservation groups throughout the nation had insisted that the agencies should involve them in developing the master plan. However, the agencies refused the request due to lack of precedence and legislation imposing public participation in natural resource management. At the same time, however, the agencies have admitted the need for public cooperation. For instance, the agencies have relied heavily upon volunteers to patrol and guide the region due to insufficient human resources and budget for years. Moreover, media and interested citizens throughout Japan have criticized their final decision regarding the master plan without public participation.

With this background, the agencies judged that some sort of public participation was indispensable to avoid further intense criticisms. Since the central issue of the management of the Shirakami Mountains is a use limit policy in the core zone, the agencies organized the round-table consisting of representatives of interested citizens to reflect the public's point of view. According to officials' explanations, the case is special

because of this background; one official felt that the public participation was not always necessary for national forest resource management. At the same time, all officials indicated that public participation was helpful in enhancing mutual understanding and public support.

The officials appreciate public participation processes because they came to realize that both the round table members and agency officials shared the same goal for management of the Shirakami Mountains. They also felt that the public's point of view was reflected through the process, resulting in establishing cooperative relationship with the representatives of the public. One official pointed out that the process currently being held could also be regarded as an occasion for the agencies to inform and educate the public.

Table 4. Summary table of the results of the official interview

	Official-A	Official-B	Official-C	Official-D	Official-E	Official-F
1. Do you think that a public participation like this is necessary?	This is a special case. I do not know whether this process is always necessary.	In this case, Yes, it is.	Yes. Because it is required by both the master plan and the public	It seems to be a necessary process.	Yes. This is a beneficial process.	Yes. It is a necessary process.
2. Do you think that this process can help to gain public support and understanding for a use limit policy?	Yes, I think so.	Yes, because we could realize that we share same goal.	Yes, because it tightens the relationship between the public and U.S.	I want to think so.	Yes, if the publics are familiar with this type of process.	I hope it can gain them.
3. Do you think that public participation process like this can contribute for constituting a use limit policy in the core zone?	Yes, it contributes a certain extent.	Yes, because we have fewer complaints for the planning than before.	Yes, in this case.	Yes, with this process we can reflect public point of view for the use limit policy.	Yes, because this process can enhance mutual trust.	Yes, because we can reflect public inputs for a use limit policy.
4. Do you think that public participation process like this might make a situation more chaos?	No, I do not think so.	No, I do not think so.	No, I do not think so.	I do not know.	No, I do not think so.	No, I do not think so.
5. Do you think that you can learn from the public through this process?	I think I already knew what public wanted to express.	One thing I could realize was that both the public and we share the same goal.	Yes, certain extent.	I do not know about it yet.	I could realize that both the public and we share the same goal.	The officials seem to have more knowledge than the public.

Results for Hypothesis 2

Hypothesis. 2 The Japanese think that the major barrier to implement public participation exists within the administrative structure and characteristics.

Respondents were asked to indicate their feeling about agreement or disagreement with each of four question regarding Hypothesis 2. Officials were asked two questions relating to Hypothesis 2.

Results of the mail survey

The first question asked whether or not the respondents felt that obstacles to presenting their opinions about the management of the Shirakami Mountains stem from a lack of channels between the public and the agencies. Sixty six percent of the respondents agreed that difficulty for presenting their opinions was derived from a lack of channels between public and the agencies while 16% did not feel this way. Eighteen percent of the respondents were not sure about the statement.

The second question inquired whether or not the respondents felt that they would have expressed their opinions if the agencies had been more open for access to decision making. The results somewhat contradict with findings of the above question. Forty-eight percent of the respondents did not feel that they would have expressed their opinions if the agencies had been more open whereas 22% did think they would have expressed their opinions. Although the majority of respondents felt that lack of channels to access the decision-making process was a part of the reason why they could not express their opinions, this result indicates that the majority of the respondents would not

have expressed an opinion even if it were more feasible.

The third question examined to what extent the respondents expected their opinions be considered by the agencies. Seventy-three percent of the respondents felt that their inputs should be carefully reviewed while 19% of the respondents did not. This result indicates that the majority of the respondents felt that agencies should review their opinions deliberately.

The fourth question investigates to what extent the respondents felt that the administrative structures and characteristics of the agencies limit consideration of their opinions. Sixty-three percent of the respondent felt that attributes of the agencies limit considering public opinion whereas 32% of the respondents did not so feel.

The majority of respondents felt that they did not have appropriate opportunities and channels to present their point of view. Moreover, the greater number of the respondents perceived that lack of opportunities to access decision making process derived from bureaucratic characteristics of the agencies. The obtained results also show that the respondents expected that the agencies carefully review public's opinions regarding the management of the Shirakami Mountains. At the same time, however, the results indicate that availability of the opportunity and channel are not the only critical elements for the respondents to manifest their thoughts. Social norms that limit capability for expressing one's opinion explicitly are a factor that needs attention for considering Japanese public participation. Based on these findings, it may be safe to say that Hypothesis 2 is supported by the mail survey respondents.

Table 5. Summary table of the results for the hypothesis 2 in the mail survey

	Strongly Disagree -3	Disagree -2	Somewhat Disagree -1	I am not sure 0	Somewhat Agree 1	Agree 2	Strongly Agree 3
1. I want to express my point of view about the management of the Shirakami Mountains. However, it is difficult because there are no such channels and opportunities to do it.	2.6%	5.3%	7.9%	18.4%	23.7%	18.4%	23.7%
2. If officials had been more open about the management of the Shirakami Mountains, I would have express my point of view about it.	13.5%	24.3%	10.8%	29.7%	8.1%	8.1%	5.4%
3. Suppose agencies hold a round table meeting: I expect my point of view will be seriously considered and taken account into decision making.	2.7%	8.1%	8.1%	8.1%	24.3%	21.6%	27.0%
4. The administrative structures and characteristics of the agencies limit to consider my opinion.	7.9%	5.3%	18.4%	5.3%	18.4%	18.4%	26.3%

Results of the official interview

The first question inquired whether or not any barrier exists for implementing public participation. Among the six respondents no one pointed out any barrier concerning the public participation process. However, one official said that selecting committee members was a difficult procedure.

The second question examined to what extent the officials could share discretion with the public about implementing the use limit policy for the core zone. Three of the six pointed out that agencies were given to make the final decision, whereas the public was not. They stated that they could hold the process like this to reflect the public's point of view in terms of the use limit policy. However, they suggested that sharing decision authority was not feasible under current circumstances. Two of the six, however, remarked that they could share decision for implementing a final decision within the

extent of administrative precedents. One of the six was not sure of the possibility of sharing decision authority with the public.

Table 6. Summary table of the results for the hypothesis 2 in official interview

	Official-A	Official-B	Official-C	Official-D	Official-E	Official-F
1. Is there any barrier to implement a process like this	No, I do not see anything about it.	No. However, selecting committee member was difficult process.	No, I do not see anything about it yet.	Nothing particular	Nothing special	No, I do not see anything about it.
2. To what extent you can share discretion in terms of a use limit policy.	We have an authority to make a final decision.	We can have a meeting like this, but we make a final decision.	The public cannot make a final decision. However, we should listen carefully what public mentions.	Only within, legitimize zone.	I do not know about it.	Only within, legitimize zone.

Summary

Officials currently do not perceive any barriers to conducting public participation. This finding contradicts that of the mail survey. This difference partly derives from the fact that the officials were involved in the round-table process with representatives of interested citizen group whereas the mail survey respondents might not have had any similar experience. The respondents might not have known the round-table processes were being conducted by the agencies.

All officials stated that the agencies were given to make a final decision regarding the use limit policy for the core zone. Although the officials conducted the round table process to reflect the public's point of view, the agencies retained responsibility for making a final decision. Two officials mentioned that unless legislation imposing public participation for natural resource management was passed, the agencies were not likely to share their authority with the public.

Several officials pointed out that they did not feel they learned from the representatives of interested citizen through the round-table process. All officials admitted that inputs addressed by the round-table members influenced the officials' point of view. However, they felt that the officials usually seemed to have more knowledge and experience than did the representatives of citizens. Although these results did not address the hypothesis directly, these statements did suggest support for the hypothesis. Officials thought public participation would be good, but they did not take it seriously. Thus, it is fair to say that their perception of public participation could also be regarded as barriers for public participation.

Results for Hypothesis 3

Hypothesis3. In public participation, the Japanese prefer indirect communication to a direct one.

Respondents were asked to indicate their feeling about agreement or disagreement with each of six questions. Officials were asked one question regarding this hypothesis.

Results of the mail survey

The first question examined whether or not neighbors and others influenced the ways of expression of the respondents. About 50% of the respondents agreed that others were important in influencing their expression.

Respondents were asked whether they wanted to speak up rather than just be informed during the public participation process. The respondents who were willing to speak up comprise 81% while 16% of the respondents were not.

The third question examined what type of format the respondents prefer for expressing their opinions during a public participation process. Forty seven percent would like to provide written comments whereas 26% want to speak when gives a choice between the two forms of expressions.

The fourth question concerned the agency's efforts to establish access to public participation and if their efforts would satisfy the respondents. Eighty one percent of the respondents indicated they would be satisfied.

The fifth question asked whether or not the respondents felt that freely

exchanging each opinion was the most critical factor in a public participation process. The result shows that 54% of the respondents felt that freely exchanging each opinon was the most important element of a public participation while 19% of the respondent did not.

The sixth question examined how the respondents felt about an opinion poll as a method to express their opinions. Forty two percent of the respondents felt that an opinion poll was an adequate method to present their point of view whereas 29% did not. This result is in accord with the results for question 3. That is, the majority of the respondents tended to prefer written form to oral one to express their point of view about the management of the Shirakami Mountains.

The results indicate that the respondents tend to be sensitive to the perceptions of neighbors. The residents of a small community often emphasize keeping up with each other. In this sense, if one's opinion contradicted the others, they often try to avoid conflict at the expense of one's intention. This is especially true in rural areas because conventional Japanese social norms are still more dominant there than they are in urban areas.

The results also show that the respondents prefer written over an oral format during a public participation process, but that an oral format is acceptable for nearly everyone while an opinion poll is acceptable to many, but not all people.

Other results show that the majority of the respondents felt that an essential element of public participation was free communication and exchanging each other's points of view in terms of the management of the Shirakami Mountains. One might conclude, given other findings, that people would prefer to exchange via written form.

Finally, there is some indicators that people want agencies to make an effort, and

nearly any form of expressions (oral, written, poll) is acceptable to a large proportion of respondents.

Table 7. Summary table of the results for the hypothesis 3 in the mail survey

	Strongly Disagree -3	Disagree -2	Somewhat Disagree -1	I am not sure 0	Somewhat Agree 1	Agree 2	Strongly Agree 3
1. I want to express my point of view about the management of the Shirakami Mountains. However, it is difficult because, I am not comfortable about eyes of the community.	5.3%	18.4%	15.8%	10.5%	21.1%	13.2%	15.8%
2. Suppose agencies hold a round table meeting with the public: I want to speak up rather than just listen.	2.6%	7.9%	5.3%	2.6%	34.2%	21.1%	26.3%
3. Suppose agencies hold a round table meeting: I would rather express my point of view in writing form than oral form.	7.9%	10.5%	7.9%	26.3%	23.7%	18.4%	5.3%
4. If the agencies make a channel for residents, the fact itself makes me somewhat satisfied.	2.7%	2.7%	5.4%	8.1%	16.2%	29.7%	35.1%
5. Suppose the agencies hold a round table meeting: I feel that freely exchanging each opinion and point of view is the most important element of the meeting.	2.7%	5.4%	10.8%	27.0%	10.8%	16.2%	27.0%
6. I think opinion poll is adequate method to reflect public point of view.	2.6%	5.3%	21.1%	28.9%	10.5%	7.9%	23.7%

Results of the official interview

The question asked whether or not officials felt that the round-table process in which they were involved was an appropriate type of public participation. All of the officials felt that the round-table process was an adequate type of public participation for the situation. Four of the six suggested that the process enhanced two-way communication. One official specifically pointed out that the process would be effective in generating the use limit policy for the core zone. Another official stated that the

process was well organized because all members had experienced a process like this before, making the process smooth.

All officials stated that the round-table members including those who were representatives of interested citizen could freely manifest their opinions through the round-table process. Many officials felt that the round-table process functioned well. They also perceived that the round-table was an adequate type of public participation. Some officials pointed out that the round-table process was appropriate for building a consensus because it allowed both the public and the officials to frankly exchange opinions. Therefore, based on these findings, the results of the mail survey moderately support the Hypothesis 3, while the results of the official interview reject it.

Table 8. Summary table of the results for the hypothesis 3 in the official interview

	Official-A	Official-B	Official-C	Official-D	Official-E	Official-F
Do you think that the round-table being conducted is adequate type of public participation?	Yes, because it allows two-way communication.	Yes, because it enhances mutual communication.	Yes, because it appears to be good methods to build a consensus.	Yes, because we can share each point of view.	Yes, because it allows U.S. to freely exchange opinions	Yes, it is good if members are well experienced for this type of process.

Results for hypothesis 4

Hypothesis 4. Opinions expressed by elderly people tend to be more listened to than those of younger people.

Respondents were asked to indicate their feeling of agreement or disagreement to one question. The question examined whether or not the respondents tended to listen more carefully to what elderly persons say than what younger ones say.

While many indicated they do behave this way, fewer than 50% were so inclined. Many others simply had no opinion, and possibly had not thought of the question previously or were in the elderly category themselves.

The findings for hypothesis 2 based on interviews with officials suggest that seniority was not a barrier to free communication. Thus, regarding the importance of elders in public participation, one might conclude that for some people they are important, but for many other people age is not a factor in giving weight to ideas.

Table 9. Summary table of the results for the hypothesis 4 in the mail survey

	Strongly Disagree	Disagree	Somewhat Disagree	I am not sure	Somewhat Agree	Agree	Strongly Agree
	-3	-2	-1	0	1	2	3
Suppose the agencies hold a round table meeting with the public: Do you feel you tend to listen more carefully when elderly people are talking than younger?	5.3%	10.5%	7.9%	31.6%	21.1%	13.2%	10.5%

Results for Hypothesis 5

Hypothesis 5. Social hierarchy often plays a critical role for free communication in Japan.

Respondents were asked three questions to indicate their feeling of agreement or disagreement about hierarchy and communication.

Results of the mail survey

The first question examined whether or not the respondents felt more comfortable talking with people whose social status was similar to theirs. Thirty-four percent agreed with the statements.

The second question inquired whether or not the respondents tended to follow persons whose social status were higher than theirs during public participation processes. The majority of respondents (53%) tend to follow comments coming from people whose social status is higher than their own.

The third question examined whether or not the respondents felt that there was a relationship between one's occupation and salience of an opinion. Sixty-two percent of the respondents felt that people whose occupations were higher than theirs tend to state appropriate opinions. The suggestion is that there is a correlation between social hierarchy and the appropriateness of one's opinion.

Responses to question 1 indicate that the proportion of respondents who were sensitive to social hierarchy is fairly small. Responses to question 2 were more positive about social hierarchy. However, since there was a large " I am not sure." response for

both questions, the influence of the respondents simply might not have thought about social hierarchy.

Results for question 2 show that more than half of the respondents perceived that they were likely to follow opinions stated by a person whose social status was higher than theirs. Moreover, responses to question 3 also indicate that the majority of the respondents felt that opinions addressed by those who have higher social status were likely to be appropriate. So, what we find is that respondents are likely to listen to all other, but they find greatest salience in the opinions of those of higher social status..

The officials did not report that social hierarchy influenced communication during the round-table process. But, since they were not explicitly queried about this topic, it is difficult to say more.

Table 10. Summary table of the results for the hypothesis 5 in the mail survey

	Strongly Disagree	Disagree	Somewhat Disagree	I am not sure	Somewhat Agree	Agree	Strongly Agree
	-3	-2	-1	0	1	2	3
1. Do you feel more comfortable when you are talking with people whose social status is similar to yours?	5.3%	7.9%	15.8%	36.8%	21.1%	2.6%	10.5%
2. Suppose you attend a meeting held by agencies: I tend to follow people whose occupations are higher than mine.	2.6%	5.3%	13.2%	26.3%	18.4%	18.4%	15.8%
3. Suppose you attend a meeting held the agencies: I feel that people, whose occupations are higher than mine, tend to make appropriate opinions.	5.4%	8.1%	5.4%	18.9%	18.9%	27.0%	16.2%

Summary of the results for each hypothesis

In this section, level of support for each hypothesis is discussed. Table 11 shows summary of the results for each hypothesis.

The first hypothesis states that the Japanese people do not perceive public participation as a necessary process in natural resource management. However, the results in the mail survey and interview with officials did not support this hypothesis. As explained earlier, they felt that public participation was necessary process in natural resource management. Officials also regard public participation as necessary process. Although their motivation and perception regarding public participation were different from those held by the mail survey respondents, they basically regarded public participation as necessary. Therefore, it is concluded that both mail survey respondents and officials do not support the first hypothesis. Detailed discussion about this point will be presented in later section.

The second hypothesis states that the public feels that Japanese administrative structure and characteristics are barriers to implementing public participation. The findings indicate that both the mail survey respondents and officials moderately support the hypothesis. The results also suggest that barriers do exist within administrative characteristics, that barriers are also related to social norms. Although the officials did not observe any barriers during the round-table process, their lack of willingness to learn from the public implied their perception about public itself might be barrier.

The third hypothesis states that the Japanese hesitate to explicitly express their points of view. The results show that the mail survey respondents moderately support the hypothesis while officials did not. The results indicate that the mail survey respondents

felt that freely exchanging opinion was an essential element for public participation. Although the respondents want to express their opinion explicitly, their social norms may block them in clearly expressing their opinions. The results also indicate that the respondents prefer written format over oral one to express their opinions. The results of the interviews of official indicate that citizen representatives do not seem to be caught in their conventional social norms. This finding suggests that providing actual opportunities for public involvement may alleviate the pressure of some social norms. In other words, the notion of social norms as barrier for free communication may be a perceived fear.

The fourth hypothesis states that the Japanese tend to listen more carefully when elderly people talk. The results show that both the mail survey respondents and officials did not support the hypothesis.

The fifth hypothesis states that the Japanese tend to emphasize social hierarchy during a public participation process. The results of the mail survey respondents support this hypothesis. Respondents perceived they might be sensitive to social hierarchy during public participation process. Regarding to results of interview to officials, questions concerning for Hypothesis 5 were not available to draw any conclusion. Therefore, testing hypothesis was not possible here.

Table 11. Level of support for each hypothesis

	Respondents	Officials
1. The Japanese do not tend to regard public participation as a necessary process in natural resource management.	Not support	Not Support
2. The Japanese think that the major barrier to implement public participation exists within the administrative structure and characteristics.	Moderately Support	Moderately Support
3. The Japanese prefer indirect communication to a direct one.	Moderately Support	Not Support
4. The Japanese tend to listen carefully what the elderly says in the decision making.	Not Support	Not Support
5. The Japanese tend to emphasize social hierarchy during a public participation process.	Support	Not Applicable

Chapter 5

Conclusions and Implications

In this chapter, limitations, conclusions, implications and future research suggested by this study are presented. In the limitation section, several shortcomings of this study are discussed. In the subsequent sections, conclusions and implications drawn from this study are presented. Related to the topic of this paper is identified in the last section.

Limitations

Several limitations exist for this study. First, the number of respondents for the mail survey was limited. The questionnaire was sent to ninety-nine residents who were randomly selected from the region. However, only thirty-eight responses were obtained. This response rate is not large enough to confidently generalize this survey to a larger population.

Second, the sample was selected from the telephone directory, resulting in a potential lack of representatives. Since the head of each household in Japan is usually the oldest male in a family, the chance of equally selecting from the entire population of the region was not possible. Therefore, the survey results might only reflect the perceptions held by relatively older males, who may hold different points of view than females and younger persons.

Third, information about the perceptions held by citizens who were involved in the round-table process is not available. Although the officials described the atmosphere and situation of the round-table process, their impressions may not necessarily represent those held by the citizen participants.

These three limitations mainly derive from budget constraints. In addition, conducting the survey in distant place made this study difficult. Although careful designation and preparation were planned in the U.S., only one person was available to carry out the survey in Japan.

Conclusions and Implication

It can be concluded that the mail survey respondents perceived that public participation was necessary for the management of the Shirakami Mountains. Respondents felt that the agencies were not doing well about the management of the area. They were critical about the lack of channels for access to decision-making processes.

The results show that respondents are willing to participate in public participation processes. They also felt that an essential element of public participation was free communication between the agencies and the public. The results also show that respondents felt that they and the agencies could develop cooperative relationships for the management of the Shirakami Mountains. Moreover, they believe that their opinions could play an important role in decision making. They did not want to simply obey the agency's decision without any public involvement; they felt they should be involved.

This study also indicates that lack of opportunities for public participation is not

the only factor in free communication; the respondent's mentality plays a role as well. For instance, several results suggest that the respondents are likely to hesitate to clearly express their opinions in a public participation process. They prefer indirect expression methods such as opinion polls and written formats to oral one. Moreover, the respondents seem to be sensitive to social hierarchy during a public participation process, which may inhibit free communication. These findings suggest that attributes such as social norms may play a role in communication during public participation.

This study also shows that the respondents will be satisfied if the agencies make efforts to provide opportunity for the public to participate during a decision making process. In other words, the agencies' effort itself may bring satisfaction to many respondents. This finding is in accord with what Etzioni (1968) mentioned about a human's inherent desire for engaging in a planning process. He stated, "Man is willing and able to construct and guide his own future, but opportunity for him to participate in this social change called planning is a first order requirement." As he mentioned, the opportunity for engaging in decision making processes may be an inherent human desire regardless of cultural and political backgrounds. In other words, current political crises and polarization between government and its publics may partly derive from people's lack of opportunity to participate in decision making processes. For this reason, one might suggest that opportunity to participate in decision making processes might be critical for the public's satisfaction, regardless of effectiveness of a government's actions. Based on this finding, it is fair to say that perception of alienation from society (in this case, lack of participation in decision making process) may cause people's dissatisfaction and distrust toward government. As one official stated, the decreasing the amount of

criticism toward the agencies after informing the public about the round-table process might support to this notion.

Officials offered different points of view about public participation. They regarded the round-table for the Shirakami Mountains as special case. They also felt that some products of public participation such as mutual understanding and freely exchanging different point of view were important. They admitted that public participation was necessary in this case. However, the officials did not perceive the process as a mutual learning process. They regarded it as an opportunity for educating and informing the public. It is important to notice findings regarding Hypothesis 1 here. That is, both the mail survey respondents and officials regarded public participation as necessary process for management of the Shirakami Mountains. However, official's reasons and motivations to have public participation were different from those of the mail survey respondents. The fundamental motivation for the agencies to have the round-table process was to gain public support, and to avoid further criticism by both public and journalists. In this sense, as Arnstein (1969) illustrates, the official's perception of public participation may be understood as providing opportunity for 'informing' and/or 'consulting.' According to Arnstein (1969), this type of public participation is classified, as 'tokenism." However, again, it is important to note that an appropriate type of public participation in one culture does not necessarily apply to others. For this reason, even though the round-table process conducted for the use limit policy for Shirakami Mountains can be regarded as 'tokenism' from a Arstein's perspective, this type may be appropriate for the Japanese political culture. Detailed discussion about this perspective is beyond the scope of this study, but it will be worth studying in the future. It is also

important to remember that legislation imposing public participation for natural resource management does not exist in Japan. Under this circumstance, it is not feasible to expect that the agencies will be open and share their authority with the public. Rather, the agencies' decision to have the round-table process for this case may be regarded as an epoch making.

Officials stated that the citizen participants freely expressed their points of view whereas mail survey respondents seem to be sensitive to factors including social status and seniority. This difference might stem from the fact that the respondents have not experienced any public participation, while the representatives of citizen were actually engaged in the round table process. In this sense, the lack of the respondent's previous experiences in public participation processes influences their current perceptions. Moreover, it is important to note that comments about perception of public participation were not available from the representatives of interested citizens who were involved in the round-table process, making further analysis limited.

Nevertheless, the necessity and role of public participation in natural resource management may become more important in the future. Another official noted that the agencies could no longer ignore public opinions and criticisms. In addition, an official states that the agencies have to rely more on public support due to constraints of budget and human resources. For these reasons, it is reasonable to conclude that the role of public participation in Japan will grow in the future.

Future research

Several issues were raised through this study. First, as mentioned earlier, a survey with a larger sample size and higher response rate would be required to draw more reliable and valid conclusions regarding the hypotheses of this study. The method of selection of respondents would also need to be reconsidered. Selection of respondents should not rely on the telephone directory. Rather, it is advisable to attain a complete list of residents of a region and sample from it. To do so, the cooperation of local government's would be essential.

Second, it is important to recognize that there is no legislation imposing public participation for natural resource management in Japan. In this situation, conducting a public participation process is difficult especially for the agencies because doing this without any legal foundation is risky. Although it seems that officials admit the necessity and advantages of public participation, the round-table process was regarded as a special case. This fact suggests that legislation requiring public participation is an indispensable element to conduct public participation in Japan. Thus, studying Japanese public participation based upon an American paradigm, where public participation is legitimized in natural resource management, should be approached cautiously

Third, appropriateness and style of public participation cannot be understood in one paradigm. As Reischauer (1977) points out, Japanese often do not manifest their opinion or feeling by clear verbal interaction:

> They have a positive mistrust of verbal skills, thinking that these tend to show superficiality in contrast to inner, less articulate feelings that are communicated by innuendo or by nonverbal means. In a highly homogeneous society like Japan's, such nonverbal forms of communication may have been easier to develop than in the countries of South and West Asia, where greater cultural diversity made verbal skills more necessary and therefore more highly prized.

Although this study suggests that the Japanese tend to hesitate to clearly manifest their opinions, this finding does not necessarily mean a difficulty in communicating. In this sense, again, an appropriate type of public participation in one culture will not necessarily apply to another. Rather, studying the appropriateness of a style of public participation should be understood within its cultural context. This is far beyond the theme of this study, yet it needs to be investigated in future research.

Finally, in relation to an issue explained above, it is important to investigate the relationship between conventional Japanese decision making processes observed in daily life and those for natural resource management. Reischauer (1977) describes the Japanese ways of agreement as follows:

> The key Japanese value is harmony, which they seek to achieve by a subtle process of mutual understanding, almost by intuition, rather than by a sharp analysis of conflicting views or by clear-cut decisions, whether made by one-man dictates or majority votes. Decisions, they feel, should not be left up any one man but should be arrived at by consultations and committee work. Consensus is the goal- a general agreement as to the sense of the meeting, to which no one continues to hold strong objections.

However, recent disputes regarding issues of natural resource management reported by journalists do not allow for these conventional decision making processes. This contrast might stem from attributes of the issues because natural resource management involves complicated political and economic values. Therefore, conventional decision making process might not be appropriate to solve these problems.

This study should be regarded as explorative rather than definitive study. However, this study, at least, might demonstrate possibility and necessity of further research about Japanese public participation.

APPENDIX

Cover Letter
Mail Survey Questionnaire
Official Interview Questionnaire

I am sincerely apologizing for suddenly sending such a letter to you. I am Kumagai, currently attending graduate program at University of Montana, studying management of National Park and protected area. I am working on my thesis that focuses on management and public participation in Japanese protected area. I am writing this letter because I would like to ask you to cooperate in conducting the research concerning my thesis.

At present, management of Shirakami Mountains has gained attentions not only from Japan but also from overseas as the region was designated as World Natural Heritage by UNESCO.

In the United States, management of protected area has often gained public attentions. Recently, however, public participation for decision-making process for natural resource management has became a critical issue. Legislation such as National Environmental Protection Act and National Forest Management Act obligating concerned agencies to involve the public for planning process. However, it is argued that public participation process does not often function well. Rather, it makes planning process more complicated. On the other hand, it is reported that public participation process can enhance information exchange, mutual trust, and learning between the public and agencies. Consequently, the management can gain support and understanding from the public, resulting in successful implementation of the plan. The role of public participation in protected area management will be more important in the future.

Now I am interested in how Japanese people perceive public participation in protected area management within the context of Japanese cultural, political, social norm, and language structures. The reason is that issues concerning protected area management do not only involve technical aspects. The crucial problem is how management reflects local residents' traditional way of usage of natural resources and emotional attachment to the surrounding area.

I believe this research can contribute to effective and sustainable protected area management in Shirakami Mountains. I would appreciate it if you would cooperate in this research. I sincerely pray your happiness in here in the United States. Thank you very much.

Sincerely yours,

Yoshitaka Kumagai

Questionnaire

Q1. Please circle your age categories listed below.

20's 30's 40's 50's 60's Over 70's

Q2. Please circle your educational background listed below.

Elementary School. Junior High School. Secondary High School.
Technical School. Junior College. Four Year College. Graduate School.

Q3. I think that the agencies are doing well about the management of Shirakami Mountains.

Q4. The public should be at least informed about the management of Shirakami Mountains.

Q5. I think that the agencies need to involve the public for the management of Shirakami Mountains

Q6. I feel that the agencies can work together with the public about the management of Shirakami Mountains

Q7. I feel that my opinion can contribute to the management of Shirakami Mountains

Q8. I feel that the residents should follow the government's decision because they have an authority to do it.

Q9. Opinions and inputs from residents should be carefully considered.

Q10. I want to express my point of view about the management of Shirakami Mountains. However, it is difficult because there are no such channels and opportunities to do it.

Q11. If officials had been more open about the management of Shirakami Mountains, I would have express my point of view about it.

Q12. Suppose agencies hold a round table meeting: I expect my point of view will be seriously considered and taken account into decision making.

Q13. The administrative structures and characteristics of the agencies limit to consider my opinion.
Q14. I want to express my point of view about the management of Shirakami Mountains. However, it is difficult because, I am not comfortable about eyes of the community

Q15. Suppose agencies hold a round table meeting with the public: I want to speak up rather than just be informed

Q16. Suppose agencies hold a round table meeting: I would rather express my point of view in writing form than oral form

Q17. If the agencies make an effort to build a channel for residents, the fact itself make me somewhat satisfied.

Q18. Suppose the agencies hold a round table meeting: I feel that freely exchanging each opinion and point of view is the most important element of the meeting.

Q19. I think opinion poll is adequate method to reflect public point of view.

Q20. Suppose the agencies hold a round table meeting with the public: Do you feel you tend to listen more carefully when elderly people are talking than younger?

Q21. Suppose you attend a meeting held by agencies: I tend to follow people whose occupations are higher than mine.

Q22. Suppose you attend a meeting held the agencies: I feel that people, whose occupations are higher than mine, tend to make appropriate opinions.

Q23. Suppose you attend a meeting held the agencies: If there are people whose social status is higher than mine, I feel that I will be nervous for expressing my opinion explicitly.

Questionnaires for the official interview

Question 1. Do you think that a public participation like this is necessary?

Question 2. Is there any barrier to implement a process like this?

Question 3. Do you think that this process can help to gain public support and understanding regarding a use limit policy?

Question 4. Do you think that public participation process like this can contribute for constituting a use limit policy in the core zone?

Question 5. Do you think that public participation process like this might make a situation more chaos?

Question 6. Do you think that you can learn from the public through this process?

Question 7. To what extent you can share discretion in terms of a use limit policy?

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